REMARKS

Claims 1-9, 11-13, 21, 22, 26 and 27 are pending in the application.

Claims 1-9, 11-13, 21, 22, 26 and 27 are rejected.

Claims 1, 2, 4-9, 12-13, 21-22 and 26-27 are rejected under 35 U.S.C. 103(a).

Claims 1 and 26 are amended.

No new matter is added.

Claims 1-9, 11-13, 21, 22, 26 and 27 remain in the case for reconsideration.

Applicant requests reconsideration and allowance of the claims in light of the above amendments and following remarks.

Objection to the specification

Although Applicant does not necessarily agree with the Examiner with respect to the objection to the specification, the phrase "by the same etching process" has been deleted from claim 1 to facilitate the allowance of this case. Thus, the objection to the specification is now overcome.

Claim Rejections – 35 USC § 103

Claims 1, 2, 4-9, 12-13, 21-22 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted prior art in view of Urano JP Patent No. 11077507 ("Urano").

Applicant respectfully traverses the rejections.

Claim 1 is amended to recite, "the interconnection layer, the capping layer, and the etching stopper are formed by sequentially depositing a first material layer for interconnection, a second material layer for capping, and a third material layer for stopping etching, patterning the third material layer, and then patterning the second and first material layers using the patterned third material layer." Support for the limitations can be found in the specification at page 4, lines 30-35 of the present application.

None of the cited references, either alone or in combination, teach or suggest, for example, "the interconnection layer, the capping layer, and the etching stopper are formed by sequentially depositing a first material layer for interconnection, a second material layer for capping, and a third material layer for stopping etching, patterning the third material layer, and then patterning the second and first material layers using the patterned third material layer," as recited in claim 1.

The Examiner has argued that "admitted prior art *inherently* teaches the limitation of the interconnection layer, the capping layer and the etching stopping layer are formed by sequentially depositing material layers, and patterning the material layers by the same etching process." (Emphasis added)

However, importantly, in relying upon a theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. MPEP 2112; *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990). Also see MPEP 2142.02.

No such basis is provided in the official action. In the background section of the present invention, all it discusses is the formation of an interconnection layer 14 and a capping layer 16 thereon; and the prior art problems due to the resulting structure, i.e., the thickness of the capping layer 16 remaining on the interconnection layer 14 after the etching process for forming the contact holes 20a, 20b, and 20c being not uniform. If the etching stop layer is formed on the capping layer 16 in the prior art as suggested by the Examiner, the prior art problem of the capping layer thickness being non-uniform would not happen and there is no need for the present invention. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure. See MPEP 2142.

Thus, applicant respectfully submits that there is no basis in the admitted art to believe that the admitted prior art *inherently* teaches that the interconnection layer, the capping layer, and the etching stopper are formed by sequentially depositing a first material layer for interconnection, a second material layer for capping, and a third material layer for stopping etching, patterning the third material layer, and then patterning the second and first material layers using the patterned third material layer.

Further, in contrast, in Urano, a nitride film 8 as an etching stopper is formed *after* patterning the antireflection film 2 and the first Al wiring 1. Therefore, the nitride film 8 covers the entire substrate. Therefore, nothing in Urano teaches or discloses "patterning the third material layer, and then patterning the second and first material layers using the patterned third material layer," as recited in claim 1. See paragraph 0018 of Urano. Thus, Urano does not cure the deficiency of the admitted prior art.

Therefore, none of the cited references, either alone or in combination, teach or suggest all of the limitations of claim 1, for example, "the interconnection layer, the capping layer, and the etching stopper are formed by sequentially depositing a first material layer for

interconnection, a second material layer for capping, and a third material layer for stopping etching, patterning the third material layer, and then patterning the second and first material layers *using the patterned third material layer*."

In addition, the admitted prior art is directed to solving the above-described problem and the Urano reference is directed to a method for a contact hole formation method without forming an inorganic polymer material that cannot be removed during an ashing process. See [0018] of Urano. There is no motivation or suggestion to combine the cited references.

For the reasons discussed above, a *prima facie* case of obviousness has not been established.

Therefore, claim 1 is allowable and claims 2-9, 11-13, 21, 22, which depend therefrom and recite features that are neither taught nor disclosed in the cited references, are also allowable.

Also, claim 26, which recites limitations similar to claim 1, is also believed to be allowable for the reasons discussed above and claim 27 is allowable for its dependency and its own merits.

In conclusion

For the foregoing reasons, reconsideration and allowance of claims 1, 2, 4-9, 12-13, 21-22 and 26-27 of the application as amended is solicited. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

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Respectfully submitted,

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Limited Recognition Under 37 CFR § 10.9 (b)

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